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Supplemental Material

Occupational Exposure to Benzene and Non-Hodgkin Lymphoma in a Population-Based Cohort: The Shanghai Women's Health Study

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Table S1. Associations between cumulative benzene exposure and NHL with 5- and 10-year lag of exposure.

Exposure Metric	Cases (N)	Person-Years of Follow-up	Hazard Ratio (95% C.I.)^a	p-value
<i>5-year lag of cumulative exposure (mg/m³-years)</i>				
Unexposed	78	687,606	1.0 (ref)	
Tertile 1	3	39,217	1.32 (0.48, 3.64)	0.59
Tertile 2	9	39,283	2.08 (1.00, 4.33)	0.05
Tertile 3	12	39,123	2.16 (1.17, 4.00)	0.01
p trend				0.007
<i>10-year lag of cumulative exposure (mg/m³-years)</i>				
Unexposed	78	690,525	1.0 (ref)	
Tertile 1	3	38,406	1.47 (0.53, 4.05)	0.46
Tertile 2	9	38,257	2.16 (1.04, 4.49)	0.039
Tertile 3	12	38,040	2.04 (1.08, 3.86)	0.029
p trend				0.02

^aLagged cumulative exposure calculated by treating benzene exposure as a time-varying explanatory variable with age as the time scale as implemented using the stcox procedure in Stata v 13.1. Hazard ratios and 95% confidence intervals estimated from Cox proportional hazard models and adjusted for ever smoking, ever use of alcohol, BMI, education, and birth cohort.

Table S2. Associations between the job/industry specific benzene exposure metrics and myeloid leukemia.

Exposure Metric	# Subjects	Cases ^a	Model 1 (Unadjusted) ^b Hazard Ratio (95% CI)	p-value	Model 2 (Adjusted) ^c Hazard Ratio (95% C.I.)	p-value
<i>Ever exposure</i>						
Unexposed	62,299	29	1.0 (ref)		1.0 (ref)	
Exposed	10,788	4	0.83 (0.29, 2.36)	0.72	0.74 (0.26, 2.11)	0.57
<i>Exposure duration</i>						
Unexposed	62,299	29	1.0 (ref)		1.0 (ref)	
≤ median (≤ 17 years)	5,677	0	--	--	--	--
> median (> 17 years)	5,111	4	1.79 (0.63, 5.08)	0.28	1.52 (0.53, 4.38)	0.43
Unexposed	62,299	29	1.0 (ref)		1.0 (ref)	
Tertile 1: (1-11 years)	3,698	0	--	--	--	--
Tertile 2: (12-21 years)	3,562	0	--	--	--	--
Tertile 3: (> 21 years)	3,528	4	2.62 (0.92, 7.50)	0.07	2.23 (0.77, 6.44)	0.14
<i>Cumulative exposure (mg/m³-years)</i>						
Unexposed	62,299	29	1.0 (ref)		1.0 (ref)	
≤ median (≤ 59.3 mg/m ³ -years)	5,394	0	--	--	--	--
> median (> 59.3 mg/m ³ -years)	5,394	4	1.65 (0.58, 4.71)	0.35	1.44 (0.50, 4.14)	0.50

^a33 cases of myeloid leukemia included 17 AML (n=2 exposed), 7 chronic myeloid leukemia (n=1 exposed), 1 acute monocytic leukemia, 2 acute erythroid leukemias, 2 subacute myeloid leukemias, and 4 unspecified myeloid leukemias (n=1 exposed). ^b Hazard ratios and 95% confidence intervals estimated from Cox proportional hazard models with entry and exit age as the time scale. ^cModel 2 further adjusted for ever smoking and education.